Grosch, K.A.. Correlation between road wear of tires and computer road wear simulation using laboratory abrasion data (5) 791
Gurovich, Daniel; MacOsko, Christopher W.; Tirrell, Matthew: The influence of filler—filler and filler—polymer interaction on the physical properties of silica-filled liquid polyisoprene (1) 1
Gurovich, Daniel; Macosko, Christopher W.; Tirrell, Matthew: The influence of filler—filler and filler—polymer interactions on the physical properties of silica-filled liquid polyisoprene (1) 1
Gurovich, Daniel; Macosko, Christopher W.; Tirrell, Matthew: The influence of block copolymers on silica-filled polyisoprene (1) 13
Gurvich, Mark: On characterization of anisotropic elastomeric materials for structural analysis (1) 115

Hamed, G.R.: Tear strength of black-filled natural rubber crosslinked via conventional and efficient sulfur cures (2) 227
Hamed. G.R.; Hua, K.-C.: Effect of ZnO particle size on the curing of carboxylated NBR and carboxylated SBR (2) 214
Heideman. Geert; Datta, Rabin N.; Noordermeer, Jacques W.M.; van Baarle, Ben: Activators in accelerated sulfur vulcanization (review) (3) 512
Heidiman, Geert; Noordermeer, Jacques W.M.; Datta, Rabin N.; Van Baarle, Ben: Reduction in rubber compounds (2) 336
Heinrich, Gert, see Reincke, Katrin: (4) 662
Herbert, Erik G., see Tsou, Andy H.: (4) 678
Herd, Charles R., see Smith, Archie P.: (4) 691
Hergenrather, William L., see Lin, Chenchy J.: (1) 90
Hergenrother, William L.; Hilton, Ashley S.; Lin, Chenchy J.: Model reaction of polysulfide with olefin (4) 646
Hilliou, L.; van Dusschoten, D.; Wilhelm, M.; Burhin, H.; Rodger, E.R.: Increasing the force torque transducer sensitivity of an RPA 2000 by a Factor 5 - 10 via advanced data acquisition (1) 192
Hilton, Ashley S., see Hergenrother, William L.:(4) 646
Hogan, Terrence E., see Lin, Chenchy J.: (1) 90
Hsiao, Benjamin S., see Toki, Shigeyuki: (2) 317; see Tosaka, Masatoshi (4) 711
Hua, K.-C., see Hamed, G.R.: (2) 214
Huntink, N.M.; Datta, R.N.; Noordermeer, J.W.M.: Addressing durability of rubber compounds (review) (3) 476

Ibarra-Gomez, Rigoberto; Marquez, Alfredo; Mendoza-Duarte, Monica: DMA analysis of conductive BR/EPDM blends (5) 947
Ikeda, Yuko, see Kajiwara, Kanii: (4) 611
Ikeda, Yuko, see Toki, Shigeyuki: (2) 317
Ikeda, Yuko, see Tosaka, Masatoshi: (4) 711
Ilisch, S., see Le, H.H.: (1) 147; (5) 815
Isayev, A.I., see Li, C.T.: (5) 873
Isayev, A.I., see Oh, Jeong Seok: (4) 745

Jah, R. Jam, see Zohurui, G.H.: (4) 736
Jakob, B., see Le, H.H.: (1) 147
Johnson, S.H., see Quintavalla, S.I.: (5) 972

Kajiwara, Kanii; Kameda, Yoshihiro; Ikeda, Yuko; Urakawa, Hiroshi; Kawamura, Takanobu; Urayama, Kenji; Kohiya, Shinzo: Biaxial tensile behavior of rubber vulcanizates. I. Silica and gum stock (4) 611
Kameda, Yoshihiro, see Kajiwara, Kanii: (4) 611
Katbab, A.A., see Bazgir, S.: (1) 176
Katbab, A.A., see Sararoudi, S. Shafiei: (5) 847
Kawamura, Kenji, see Kajiwara, Kanii: (4) 611
Kiatkamjornwong, S., see Suriyachai, P.: (5) 914
Kohijya, Shinzo, see Tosaka, Masatoshi: (4) 711
Kohjiya, Shinzo, see Kajiwara, Kanii: (4) 611
Kozak, N., see Grigoryeva, O.: (1) 131

Le, H.H.; Ilisch, S.; Jakob, B.; Radusch, H.-J.: Online characterization of the effect of mixing parameters on carbon black dispersion in rubber compounds using electrical conductivity (1) 147
Le, H.H.; Prodanova, I.; Ilisch, S.; Radusch, H.-J.: Online electrical conductivity as a measure to characterize the carbon black dispersion in oil containing rubber compounds with different polarity of the rubber (5) 815
Lee, B.L., see Song, J.H.: (4) 593

Li, C.T.; Isayev, A.I.; Warley, R.L.: Experimental study and simulation of interface development and penetration in two-component transfer molding of rubber compounds (5) 873
Li, W., see Xia, Yong: (2) 230
Lin, Chenchy J.; Hogan, Terrence E.; Hergenrather, William L.: On the filler flocculation in silica and carbon black filled rubbers: Part II. Filler flocculation and polymer—filler interaction (1) 90
Lin, Chenchy J., see Hergenrother, William L. (4) 646
Liu, Lizhi, see Toki, Shigeyuki: (2) 317

Macosko, Christopher W., see Gurovich, Daniel: (1) 13
Magee, Ricky W., see Smith, Archie P.: (4) 691
Marckmann, G., see Chagnon, G.: (4) 724
Marquez, Alfredo, see Ibarra-Gomez, Rigoberto: (5) 947
Mars, W.V.; Fatemi, A.: Factors that affect the fatigue life of rubber: A literature survey (review) (3) 391
Matsumura, Tomoyuki, see Choi, Wonmun: (2) 380
Mekewi, M.A., see Mousa, A.M.: (2) 278
Mendoza-Duarte, Monica, see Ibarra-Gomez, Rigoberto: (5) 947
Mesmacque, Gerard, see Gentot, Laetitia: (4) 759
Mohebat, R., see Zohurui, G.H.: (4) 736
Mott, P.H., see Anderson, M.L.: (2) 293
Mousa, A.M.; Mekewi, M.A.; El-Mosallamy, ES.H.; Baer, E.: Adhesion strength evaluation via constrained blister test: I. SIBS/Polystyrene and polypropylene (2) 278
Murakami, Syozo, see Toki, Shigeyuki: (2) 317
Murakami, Syozo, see Tosaka, Masatoshi: (4) 711

Naskar, Kinsuk; Noordemeer, W.M.: Dynamically vulcanized PP/EPDM blends: Multifunctional peroxides as crosslinking agents —Part I (5) 955
Nazockast, H., see Bazgir, S.: (1) 176
Nazockdast, H., see Sararoudi, S. Shafiei: (5) 847
Ngai, K.L.; Roland, C.M.: Models for the component dynamics in blends and mixtures (review) (3) 579
Nikiel, L., see Roland, C.M.: (2) 372
Noordermeer, J.W.M., see Reuvekamp, L.A.E.M.: (1) 34
Noordermeer, Jacques W.M., see Heideman, Geert: (2) 336
Noordermeer, W.M., see Huntink, N.M.: (3) 476
Noordermeer, W.M., see Naskar, Kinsuk: (5) 955

Oh, Jeong Seok; Isayev, A.I.; von Meerwall, E.: Molecular mobility in ulttrasonically devulcanized unfilled butadiene rubber (4) 745
Oliver, L.R., see Shen, Y.: (2) 257

Paeglis, Arnis U.: A simple model for predicting heat aging of EPDM rubber (2) 242
Patil, Pankaj Y.; van Ooij, William J.: Mechanistic study of the role of one-component resins in rubber-to-brass bonding in tires (5) 891
Pierre, C.C.; Datta, R.N.: Spectroscopic studies on reaction between squalene and vulcanizing agents in the presence and absence of zinc-2-mercaptopyridine-N-oxide (2) 201
Pompradub, Sirilux, see Tosaka, Masatoshi: (4) 711
Poompradub, Sirilux, see Toki, Shigeyuki: (2) 317
Prasassarakich, P., see Suriyachai, P.:(5) 914
Prodanova, I., see Le, H.H.: (5) 815
Puskas, J.E., see Roland, C.M.: (2) 372

Quintavalla, S.I.; Johnson, S.H.: Extension of the Bergström-Boyce model to high strain rates (5) 972

Radusch, H.-J., see Le, H.H.: (1) 147
Radusch, H.-J., see Le, H.H.: (5) 815
Rajeev, R.S.; De, S.K.: Thermoplastic elastomers based on waste rubber and plastics (review) (3) 569
Ran, Shaofeng, see Toki, Shigeyuki: (2) 317
Rault, J., see Trabelsi, S.: (2) 303
Reincke, Katrin; Grellmann, Wolfgang; Heinrich, Gert: Investigation of mechanical and fracture mechanical properties of elastomers filled with precipitated silica and nanofillers based upon layered silicates (4) 662

Reuvekamp, L. A. E. M.; Debnath, S.C.; ten Brinke, J.W.; van Swaaij, P.J.; Noordermeer, J.W.M.: Effect of zinc oxide on the reaction of TESPT silane coupling agent with silica and rubber (1) 34
Robertson, C.G., see Roland, C.M.: (2) 372
Rodger, E.R., see Hilliou, L.: (1) 192
Roland, C.M.; Robertson, C.G.; Nikiel, L.; Puskas, J.E.: Filler dispersion in hyperbranched polyisobutylene (2) 372
Roland, C.M., see Ngai, K.L.: (3) 579
Roland, C.M.: Naval applications of elastomers (review) (3) 542
Rowland, C.M., see Anderson, M.L.: (2) 293

Sararoudi, S. Shafiei; Nazockdast, H.; Katbab, A.A.: Study on parameters affecting the morphology development of dynamically vulcanized thermoplastic elastomers based on EPDM/PP in a co-rotating twin screw (5) 847
Sarkar, Mousumi De, see Bandyopadhyay, Abhuit: (5) 830
Schrag, John L.: International Rubber Science Hall of Fame Inductee: John D. Ferry (2) G2
Schulze, Jonathan S., see Tsou, Andy H.: (4) 678
Shen, Y.; Chandrashekhara, K.; Breig, W.F.; Oliver, L.R.: Neural network based constitutive model for rubber material (2) 257
Sics, Igors, see Toki, Shigeyuki: (2) 317
Sics, Igors, see Tosaka, Masatoshi: (4) 711
Smith, Archie P.; Aybar, Toni L.; Magee, Ricky W.; Herd, Charles R.: Carbon black dispersion measurement in rubber vulcanizates vis interferometric microscopy (4) 691
Song, J.H.; Costanzo, F.; Lee, B.L.: Fatigue of cord—rubber composites: V. Cord reinforcement effects (4) 593
Starostenko, O., see Grigoryeva, O.: (1) 131
Stephenson, N.R., see Gradwell, M.H.S.: (5) 931
Suriyachai, P.; Kiatkamjornwong, S.: Natural rubber-g-glycidyl methacrylate/styrene as a compatiblizer in natural rubber/PMMA blends (5) 914
Svec, F.; Frechet, J.M.J.; Duvdevani, J.: Testing of compositional distribution in brominated isobutylene elastomers (1) 78

Ten Brinke, J.W., see Reuvekamp, L.A.E.M.: (1) 34
Tirrell, Daniel, see Gurovich, Daniel: (1) 13
Toki, Shigeyuki; Sics, Igors; Ran Shaofeng; Liu, Lizhi; Hsiao, Benjamin S.; Murukami, Syozo; Tosaka, Masatoshi; Kohjiya, Shinzo; Poompradub, Sirilux; Ikeda, Yuko;: Strain-induced molecular orientation and crystallization in natural and synthetic rubbers under uniaxial deformation by in-situ synchrotron X-ray study (2) 317
Toki, Shigeyuki, see Tosaka, Masatoshi: (4) 711
Tosaka, Masatochi; Kohija, Shinzo; Murakami, Syozo; Pompradub, Sirilux; Ikeda, Yuko; Toki, Shigeyuki; Sics, Igors; Hsiao, Benjamin S.: Effect of network-chain length on strain-induced crystallization of NR and IR vulcanizates (4) 711
Tosaka, Masatoshi, see Toki, Shigeyuki: (2) 317
Trabelsi, S.; Albouy, P.-A.; Rault, J.: Stress-induced crystallization properties of natural and synthetic cis-polyisoprene (2) 303
Tsou, Andy H.; Westwood, Alistair D.; Schulze; Jonathan S.; Herbert, Erik G.: Cure state distribution in rubbers by dynamic nano-indentation (4) 678
Tsou, Andy H., see Toki, Shigeyuki: (2) 317

Urakawa, Kanazawa, see Kajiwara, Kanii: (4) 611
Urayama, Kenji, see Kajiwara, Kanii: (4) 611

Van Baarle, Ben, see Heideman, Geert: (2) 336
van Dusschoten, D., see Hilliou, L.: (1) 192
van Ooij, William J., see Patil, Pankaj Y.: (5) 891
Van Swaaij, P.J., see Reuvekamp, L.A.E.M.: (1) 34
Verron, E., see Chagnon, G.: (4) 724
Vijayabaskar, V.; Costa, Francis Rene; Bhowmick, Anil K.: Influence of electron beam irradiation as one of the mixed crosslinking systems on the structure and properties of nitrile rubber (4) 624
von Meerwall, E., see Oh, Jeong Seok: (4) 745

Walton, Kim L.: Metallocene catalyzed ethylene/alpha olefin copolymers used in thermoplastic elastomers (review) (3) 552

Wang, Hsien C., see Xie, Donghang: (1) 161
Warley, R.L., see Li, C.T.: (5) 873
Westwood, Alistair D.;, see Tsou, Andy H.: (4) 678
Wilhelm, M., see Hilliou, L.: (1) 192
Williams, M.G., see Dharmarajan, N.: (2) 356

Xia, Yong; Li, W.; Xia, Yuanming: Study on the compressible hyperelastic constitutive model of tire rubber compounds under moderate finite determination (2) 230
Xia, Yuanming, see Xia, Yong: (2) 230
Xie, Donghang; Wang, Hsien C.: FTIR spectroscopic studies on curing of brominated poly(isobutylene-co-4-methylstyrene) (1) 161

Yashin, V.V.; Hong, C.K.; Isayev, A.I.: Thermomechanical (1) 50

Zohuri, G.H.; Mohebat, R.; Jah, R. Jam; Armadjo, S.: Low cis-polymerization of butadiene using TiCl4 and bisupported of SiO2/MgCl2 (ethoxide type)/TiCl4 catalysts (4) 736

Vol. 77, 2004
SUBJECT INDEX

Abrasion data, correlating road wear with laboratory computer simulation (5) 791
Acoustic uses, of rubber in naval applications (review) (3) 542
Activators, in accelerated sulfur vulcanization (review) (3) 512
Adhesion strength, between SIBS and polystyrene or PP, evaluated by constrained Blister test (2) 278

Aircraft tires, naval (review) (3) 542
Anisotropic elastomeris, characterization for structural analysis (1) 115
Antidegradants, for improving durability of rubber (review) (3) 476
Arruda—Boyce model, for elasticity, compared with others (4) 724
Averaging "on the fly", to increase sensitivity of RPA 2000 (1) 192

Bergström-Boyce model, for high strain rates (5) 972
Biaxial tensile behavior, of NR with conventional or *in-situ* developed silica (4) 611
Blends and mixtures, model for component dynamics (review) (3) 579
Blends, of BR/EPDM, DMA analysis for conductivity (5) 947
Blends, of silicone rubber and fluorocarbon rubber, dependence of physical properties and processing on blend morphology (5) 856
Block copolymers, influence on silica-filled polyisoprene (1) 13
Bonded rubber disks, compressive stress-strain measurements (2) 293
BR and BIMS, tested for cure state distribution using nano-indentation (4) 678
BR, of low *cis* form, using homogeneous and heterogeneous Ziegler-Natta catalyst (4) 736
BR, unfilled, ultrasonically devulcanized, molecular mobility in (4) 745
BR/EPDM blends with CB, evaluated by DMA for viscoelasticity as function of strain amplitude (5) 947
Brominated isobutylene elastomers, compositional distribution (1) 78

Carbon black dispersion, in oil containing rubber, measured by online electrical conductivity (5) 815
Carbon black, dispersions in hyperbranched polyisobutylene (2) 372
Carbon black, dispersions in rubber vulcanizates studied by interferomatric microscopy (4) 691
Carbon black dispersion, measuring on line by using different mixing parameters (1) 147
Carbon-black-filled rubbers, filler flocculation (1) 90
Catalyst, bisupported, of $SiO_2/MgCl_2/TiCl_4$, for low *cis*PBR (4) 736
Compatibilizer, for NR/PMMA blends, using NR-g-glycidyl methacrylate/styrene (5) 914
Compositional distribution, in brominated isobutylene elastomers (1) 78
Compressble hyperelastic constitutive model, of tire rubber compounds (2) 230
Compression, of bonded rubber disks (2) 293
Computer simulation, of road wear, using laboratory abrasion data (5) 791
Conductive blends, of BR/EPDM and CB (5) 947
Constrained Blister test, for evaluating adhesion of SIBS/polystyrene and PP (2) 278
Cord reinforcement effect, in study of fatigue behavior of cord—rubber composites for tires (4) 593
Crack initiation and propagation, In study of elastomers filled with silica or nano-dispersed layered silicate (4) 662
Crosslinking system, mixed, for NBR using electron beam irradiation in (4) 624
Crystallizability of chains and topology of crosslinked networks, to explain strain-induced molecular orientation (2) 317
Crystallization, strain-induced, of NR and IR, effect of network-chain length (4) 711
Cure state distribution, of BR and BIMS, determined by dynamic nano-indentation (4) 678
Curing, conventional vs efficient S type, for black-filled NR, tear strength results (2) 227
Curing, of brominated poly(isobutylene-co-4-methylstyrene), FTIR studies (1) 161
Curing, of NR with cyclic polysulfides (2) 380
N-(cyclohexylthio)phthalimide, as pre-vulcanization inhibitor when using N-t-butyl-2-benzothiazole sulfenamide (5) 931

2,5-dimethyl-2-t-butylperoxy-5-hydroxy hexane, for catalyzing polymerization of at least two olefines in a two-step emulsion polymerization (4) 776
Dispersion, of carbon black in rubber vulcanizates, studied by interferometric microscopy (4) 691
DMA (Dynamic Mechanical Analysis), to evaluate viscoelastic properties of BR/EPDM/CB blends (5) 947
Durability, of rubber compounds (review) (3) 476

Dynamic moduli, of BR and BIMS, by dynamic nano-indentation (4) 678
Dynamic vulcanization, of EPDM/PP in co-rotating twin screw extruder, parameters affecting morphology development (5) 847

Eight-chain model, for characterizing hyperelastic mdchanical behavior of tire rubber (2) 230
Elasticity, compared with various models (4) 724
Electron beam irradiation, in mixed crosslinking system for NBR (4) 624
Environmental conditions, as they affect fatigue life of elastomers (review) (3) 391
EPDM rubber, simple model for heat aging (2) 242
EPDM/PP, parameters affecting morphology development of dynamically vulcanized (5) 847
EPDM/PP, silica-reinforced, dynamically vulcanized, correlation of microstructure—properties (1) 176
Epoxidized NR, nanoscale organic-inorganic composite with silica Sol-gel technique, for preparation of epoxidized NR/silica nanoscale organic-inorganic composites (5) 830
Ethylene copolymers and terpolymers, based on metallocene catalysts (review) (3) 552

Fatigue life of rubber, factors affecting (review) (3) 391
Fatigue, of cord—rubber composites, correlation with temperature rise (4) 593
Ferry, John D., International Rubber Science Hall of Fame Inductee, 2004 (2) G2
Filler dispersions, in hyperbranched polyisobutylene (2) 372
Filler—filler and filler—polymer interactions in liquid IR (1) 1
Flocculation, of filler in silica and carbon black filled rubbers (1) 90
Fluorocarbon rubber, blended with silicone rubber, dependence of physical properties and processing on blend morphology (5) 856
Footwear, history and production (review) (3) 413
Fracture mechanics, as affected by precipitated silica vs. nanofillers based on layered silicates (4) 662

Gent formulations, for rubber elasticity, compared with other models (4) 724
George Stafford Whitby Award for 2004 to Roderick P. Quirk (2) G4
Ground tire scrap, reclaimed by mixing with virgin rubber and being revulcanized (1) 131

Hart—Smith model, for elasticity, compared with others (4) 724
Heat aging, of EPDM rubber, simple model for (2) 242
High strain rates, in testing filled elastomers by Bergström-Boyce model, extended to high strain ratesfor filled polybutadiene (5) 972
Hyperelasticity, characterizing by Neural network (2) 257

Interface development and penetration, in two-component transfer molding (5) 873
IR, natural and synthetic, stress-induced crystallization properties (2) 303
IR, silica-filled liquid, influence of filler—filler and filler—polymer interactions on physical properties (1) 1
IR, effect of network-chain length on strain-induced crystallization (4) 711

Low-*cis* polymerization, of butadiene, using TiCl4 and bisupported catalysts of $SiO_2/MgCl_2/TiCl_4$ type (4) 736

Mechanical load, as it affects fatigue of elastomers (review) (3) 391
Melvin Mooney Distinguished Technology Award for 2004, to Oon Hock Yeoh (2) G4
Metallocene polymerized ethylene elastomers (review) (3) 552
Microscopy, interferometric, for studying carbon black dispersion in rubber vulcanizates (4) 691
Microstructure-properties correlation, in silica-reinforced EPDM/PP vulcanizates (1) 176
Mixing parameters, in developing model for on-line characterization of carbon black dispersion (1) 147
Model reaction, of polysulfide with olefin (4) 646
Model, for characterizing carbon black dispersion considering various mixing parameters (1) 147
Model, for predicting heat aging of EPDM rubber over a range of temperatures and time (2) 242
Modeling, of stress-softening for elastomer materials (4) 759
Models, for component dynamics in blends (review) (3) 579
Modifiers for PP, with isotactic propylene crystallinity (2) 356
Modifiers, for TPEs (3) 552
Molecular mobility, in ultrasonically devulcanized unfilled BR (4) 745
Molecular orientation and crystallization, in natural and synthetic rubbers, strain-induced under uniaxial deformation (2) 317

Morphology development, of dynamically vulcanized EPDM/PP thermoplastic elastomers, in a co-rotating twin screw extruder (5) 847
Multifunctional additives, their role in accelerated sulfur vulcanization (review) (3) 512
Multifunctional peroxides, as crosslinking agents for dynamically vulcanized PP/EPDM blends (5) 955

Nano-indentation, For determinibg cure state distribution in BR and BIMS (4) 678
Naval applications, of elastomers (review) (3) 542
NBR, carboxylated, effect of ZnO particle size on cure (2) 214
NBR, influence of electron beam irradiation on structure and properties (4) 624
Network-chain length, effect on strain-induced crystallization of NR and IR rubbers (4) 711
Neural network, for defining strain energy function for hyperelastic materials (2) 257
NR, black-filled, tear strength compared after conventional or efficient S cures (2) 227
NR, effect of network-chain length on strain induced crystallization (4) 711
NR, epoxidized, silica nanoscale composite (5) 830
NR/PMMA blends, compatibilized with NR-g-glycidyl methacrylate/styrene (5) 914
NR-g-glycidyl methacrylate, compatibilizer for blends of NR/PMMA (5) 914

Oil-containing compounds of rubbers having different polarities, measuring carbon black dispersion by online electrical conductivity (5) 815
One-component resins, in rubber-to-brass bonding in tires, mechanistic study of (5) 891
On-line characterization, of carbon black dispersion considering different mixing parameters (1) 147
Online electrical conductivity, to characterize carbon black dispersion in oil containing rubber compounds (5) 815
Oxygen and ozone, effects on durability of rubber (review) (3) 476

PDMS-PI blopck copolymers, influence on silica-filled polyisoprene (1) 13
Poly(isobutylene-co-4-methylstyrene), brominated, FTIR studies on curing (1) 161
Polybutadiene rubber, filled, tested at high strain rate by Bergström-Boyce model (5) 972
Polyisobutylene, hyperbranched, filler dispersion (2) 372
Polymer-filler interaction, in silica and carbon black filled rubbers (1) 90
Polysulfides, cyclic, synthesis and properties as curing agents (2) 380
Polysuslfides, model reaction with olefins and polysulfide (4) 646
PP, modified with isotactic propylene crystallinity (2) 356
PP/EPDM blends, vulcanized with multifunctional peroxides (5) 955
Pre-vulcanization inhibition, of N-t-butyl-2-benzothiazole sulfenamide cure by N-(cyclohexylthio)phthalimide (5) 931

Quirk, Roderick P., George Stafford Whitby Award, 2004 (2) G4
Reclaiming, of GTR (ground tire rubber) by revulcanizing with virgin rubber (1) 131
Road wear of tires, correlating with computer simulation using abrasion data (5) 791
RPA2000, increasing force torquqe transducer sensitivity via advanced data acquisition (1) 192
Rubber Division, ACS, 2004 Science and Technology Awards Presented at the Spring Technical Meeting (2) G4
Rubber Division, ACS, Best Paper Awards, 2003 Fall Technical Meeting, Cleveland, Ohio (2) G6
Rubber formulation, as it affects fatigue life of elastomers (review) (3) 391
Rubber-to-brass bonding, in tires, role of one-component resins (5) 891

SBR, carboxylated, effect of ZnO particle size on cure (2) 214
SBR, thermomechanical degradation during ultrasonic treatment (1) 50
Separation, of polymers differing in extremely low levels of functional groups (1) 78
Shape factors, in determining compressive strength of bonded rubber disks (2) 293
Shoe applications, of elastomers (review) (3) 413
SIBS/polystyrene and PP, adhesion strength evaluation by constrained blister test (2) 278
SIBS/polystyrene and PP, adhesion test (1) 192
Silica nanoscale organoc-inorganic hynrid with epoxidized NR (5) 830
Silica, coupling with rubber, effect if ZnO on reaction of TESPT silane coupling agent (1) 34
Silica, precipitated, vs. nanofillers based on layered silicates, effect on fracture mechanics (4) 662
Silica-filled liquid polyisoprene, influence of filler—filler and filler—polymer interaction (1) 1
Silica-filled NR, biaxial tensile behavior (4) 611
Silica-filled polyisoprene, influence of block copolymers (1) 13
Silica-filled rubbers, filler flocculation (1) 90
Silica-reinforced EPDM/PP, dynamically vulcanized, microstructure-properties correlation (1) 176

Silicone rubber/fluorocarbon rubber blends, dependence of physical properties and processing behavior on blend morphology (5) 856
Sparks-Thomas Award for 2004 to Andy H. Tsou (2) G5
Spectrometric studies, on squalene/vulcanizing agent reaction (2) 201
Squalene, reaction with vulcanizing agents with and without zinc-2-mercaptopyridine-N-oxide (2) 201
Strain energy, as derived from neural network data (2) 257
Strain-induced molecular orientation and crystallization, in NR and synthetic rubbers (2) 317
Stress-induced crystallization, of natural and synthetic IR, compared by WAXS and mechanical methods (2) 303
Stress-softening, of elastomers, modeling (4) 759
Structural analysis of anisotropic elastomers (1) 115
Synchroton X-ray studies, of NR and synthetic rubbers, to determine strain-induced orientation and crystallization (2) 317

TBPS (t-butyl polysulfide), tested with cyclododecene for reactivity (4) 646
Tear strength, of black-filled NR crosslinked by conventional and efficient S cures (2) 227
Tensile behavior, biaxial, of rubber vulcanizates with silica (4) 611
N-t-butyl-2-benzothiazole sulfenamide cure, inhibiting prevulcanization by using N-(cyclohexylthio)phthalimide (5) 931
TESPT silane coupling agent, effect of ZnO on reaction with silica and rubber (1) 34
Thermomechanical degradation, of SBR during ultrasonic treatment (1) 50
Thermoplastic vulcanizates, using multifunctional peroxides as curing agents (5) 955
Tire rubber compounds, compressible hyperelastic constitutive model (2) 230
Tires, correlating computer simulation of road wear using laboratory data with actual road tests (5) 791
Tires, rubber-to-brass bonding, study of role of one-component resins in (5) 891
Tires, study of cord reinforcement effect and fatigue (4) 593
TPEs (thermoplastics elastomers), of ethylene and alpha-olefins using metallocene catalyst (review) (3) 552
TPEs, based on ground rubber tires (review) (3) 569
TPEs, based on recycled rubber, latex and plastics (review) (3) 569
TPEs, based on waste EPDM or NBR (review) (3) 569
Transverse relaxation decay, in rubber recycling, three-component model (4) 745
Tsou, Andy H., Sparks-Thomas Award for 2004 (2) G5
Two-component transfer molding, of rubber compounds, simulation of interface development and penetration (5) 873
Two-step emulsion polymerization, using organic diperoxide catalysts (4) 776

Ultrasonic treatment, of SBR and resultant thermomechanical degradation (1) 50
Ultrasoniccally devulcanized rubber, molecular mobility in (4) 745

Vulcanization, thiuram- and sulfenamide-accelerated, role of activators (review) (3) 512

Waste rubber and plastics, as source of thermoplastic elastomers (review) (3) 569

Yeoh, Oon Hock, Melvin Mooney Distinguished Technology Award, 2004 (2) G4

Zinc loaded clay, as activator in S vulcanization (2) 336
Zinc oxide, effect on reaction of TESPT silane coupling agent with silica and rubber (1) 34
Zinc oxide, its role as activator in sulfur vulcanization (review) (3) 512
Zinc-2-mercaptopyridine-N-oxide, in a study of reaction between squalene and vulcanizing agents (2) 201
ZnO reduction, in rubber compounding, (2) 336
ZnO, effect of particle size on curing of carboxylated NBR and SBR (2) 214